

REMARKS

The claimed three-layer tubular product is partly defined by its manufacturing process. The process meltingly extrudes two layers onto the inside of a base tube. As these melted layers cool, they shrink and, therefore, the base and/or extruded layers could separate. However, the layer that ties the base to the innermost layer is made of foamed plastic so that stretching distortion of its foam bubbles and not layer separations can accommodate the shrinkage pull.

Neither this product defined by its process (e.g., claim 1) nor its result of stretched bubbles in the tying layer (e.g., claim 18) is disclosed or suggested by the Bast and/or Stanley patents of the rejections.

The objection in the Action under 35 USC 132 to limiting the foamed plastic to melt processing is traversed on the basis of page 5, lines 20 - 37, for example, of the original specification. Nevertheless, claim 1 now recites that the foamed plastic is "meltingly extruded" for closer correspondence with the exact words of the original specification.

As recognized in the Action, this necessitates withdrawal of the previous rejection from the Bast patent.

In maintaining the rejection of claim 1 under 35 USC 102 from the Stanley patent, its disclosure of cross-linked polyethylene is noted, but this cross linking is for rigidity (see column 8, lines 17-21), not adhesion.

In the Stanley patent, the layer 32 is foamable to expand as described a column 3, lines 52 - 63. The patent teaches foaming to force out, not tying (adhering) as claimed to accommodate shrinkage with bubble stretching as also claimed. The patent does not disclose or teach a foamed tying layer of adhesion plastic meltingly extruded simultaneously with an innermost layer so that cooling shrinkage of these layers produces stretched bubbles in the foam.

It is repeated that the Stanley patent does not disclose, teach or even hint that its foamed plastic layer is made of adhesion plastic tying the base to the innermost layer. Stanley's foam layer does not even have to contact the base layer as shown by water 35 in Fig. 2 and outer skin 33 in Fig. 3. If further consideration is needed, please see the Response of September 2003.

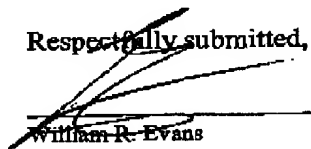
Further, the Stanley patent does not disclose or teach simultaneous melting extrusion of tying and innermost layers onto a base tube, which creates the shrinkage problem that the foamed adhesion of the tying layer accommodates by bubble stretching in the claimed invention. The tied layer, stretched bubble product would not result without these defining processes that, therefore, support patentability by clearly distinguishing from the sequential layer formation clearly described in the Abstract, for example, of the Stanley patent.

In the rejection of claim 15 and 18 - 21 the Action relies on the Stanley patent to disclose, "The tie layer has a better adhesion to the base and innermost layers than the base and innermost layers have to each other." However, as there is no such disclosure in the patent, the rejection must fail. The rejection is also insufficient for the reasons considered above for claim 1.

In order to make the distinctions of claim 1 clearer, claim 1 edits "tie" to tying and "melt processible" to meltingly together with prior limitations. These tying or bonding and melting or hot limitations are reinforced in new claim 22 that otherwise parallels and distinguishes like claim 1.

Reconsideration and allowance are, therefore, requested.

Respectfully submitted,

  
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